REMARKS

In the Final Office Action of August 25, 2005, claims 18, 19, and 21-24 were rejected under 35 U.S.C. 102(b) as being anticipated by Toumaala U.S. Patent 4,257,301 ("*Tuomaala*"); claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Tuomaala*, and claim 25 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Tuomaala* in view of Achterberg et al. U.S. Patent No. Des 388,318 ("*Achterberg*").

In response to the Final Office Action, Applicant has canceled all rejected claims but claim 18, and Applicant has presented new claims 26-33 for examination. After amendment, claims 18, 26 and 31 are independent. Applicant submits that no new matter is added by amendment herein. Each feature of each claim is supported by the written description and/or the drawings as filed.

I. The Circular Saw Blade Recited in Each the Independent Claim Patentably Defines over the References of Record

Each independent claim now presented for examination recites a circular saw blade that has a planar saw body and a cutting edge that encircles the planar saw body as shown, for example, in Fig. 4 of the present application. The saw body includes a planar annular section, also as illustrated in Fig. 4. The annular section has oppositely facing parallel surfaces which are intended to pass directly between lubricating guide supports when the saw blade is used in a saw arrangement as shown, for example, in Fig. 1. The annular section further has a substantially uniform axial thickness between the oppositely facing parallel surfaces. The annular section thereby generally lies in a plane. The planar annular section of the saw body also defines a plurality of liquid transport cavities therein, and each one of the cavities is sufficient (i.e., has a sufficient area and dimension) to receive liquid therein for transport, such as from lubricating guide supports of the saw arrangement of Fig.1.

A. Claim 18: The "0.080 inch" Feature

In an aspect of the circular saw blade, as recited in independent claim 18, the axial thickness of the annular planar section is less than 0.080 inches.

As a preliminary remark, Applicant notes that claim 18 was rejected in the Final Office Action based on *Tuomaala* at FIGS. 1 and 2, and at col. 3, line 57 through col. 4, line 29. *Tuomaala* was cited as clearly anticipating claim 18, including the feature that the axial thickness was no greater than "0.080 inch." Upon careful inspection by Applicant, however, it has been discovered that nothing in the referenced disclosure actually shows this "0.080 inch" feature. To the contrary, *Tuomaala* discloses that the thickness of the saw blade is "2.8 mm," which is equal to 0.110 inches. See *Tuomaala*, col. 4, lines 10-15. Thus, the disclosure of *Tuomaala* actually comprises a circular saw blade that clearly does not anticipate the recited "0.080 inch" feature of claim 18.

In amending claim 18, Applicant notes that, as set forth in the present application, the conventional floor for circular saw blades used to cut Southern Yellow Pine at the time of the present invention was 0.080 inches. An advantage provided by the present invention is that the circular saw blade of the invention may have a thickness less than 0.080 inches when used, in conjunction with a lubricating saw guide, for cutting Southern Yellow Pine. Such a saw blade and saw arrangement was novel and non obvious at the time of the present invention and, accordingly, Applicant submits that the circular saw blade as recited in claim 18 stands in condition for allowance. Applicant is unaware of anything in *Tuomaala* or any other reference of record that discloses or suggests otherwise. Indeed, Applicant submits that *Tuomaala* is merely a representative example of the prior art at the time of the present invention.

Accordingly, Applicant submits that claim 18 stands in condition for allowance.

B. Claim 26: The Leading Corner and Trailing Edge Design

In another aspect of the circular saw blade, as recited in independent claim 26, "each said cavity defines a leading corner, a trailing edge, and a narrow-to-wide transition there between." The "leading" corner and "trailing" edge are defined with reference to the rotational direction of cutting that is defined by the cutting edge of the saw blade.

This leading corner and trailing edge feature of claim 26 is related to rejected (and now canceled) claim 20. In the Final Office Action, the same disclosure of *Tuomaala* was relied upon for the rejection of claim 20 as that for claim 18. However, upon close

examination, it is clear that *Tuomaala* fails to disclose this feature. Indeed, *Tuomaala* discloses in Fig. 1 that the strips (9) and peripheral portion (7) actually define openings, each of which includes a leading edge and a trailing corner with respect to the cutting direction (which is counterclockwise with respect to Fig. 1). *Tuomaala* thus fails to disclose an opening having a leading corner and trailing edge.

Accordingly, Applicant submits that claim 26, and claims dependent thereon, together stand in condition for allowance.

C. Claim 31: The Opening Area of the Cavities

In a third aspect of a circular saw blade, as recited in independent claim 31, "the cumulative opening area of the plurality of cavities equals approximately six percent of a cutting triangle of the circular saw blade." The cutting triangle is defined relative to the circular saw blade as shown in Fig. 3 of the present application.

Preferably, the cavities comprise three cavities that are equally spaced at 120 degrees to each other relative to the center of the saw blade, with each having an opening area equal to approximately two percent of the cutting triangle of the circular saw blade, as recited in dependent claims 32 and 33.

Applicant submits that none of the references of record, including *Tuomaala*, discloses or suggests the circular saw blade of claims 31-33 and, accordingly, Applicant submits that these claims stand in condition for allowance.

II. Comments regarding In re Boesch

In re Boesch, 617 F.2d 272, 205 USPQ215 (CCPA 1980) ("*Boesch*") is cited in the Final Office Action for the proposition that "discovering an optimum value of a result effective variable involves only routine skill in the art." Applicant cautions against the misapplication of this principle for which *Boesch* is cited when considering the claims presented for examination.

For example, in examination of claim 31 and the opening area of the cavities feature, it would be improper to apply *Boesch* in supporting the assertion that it would have been obvious to enlarge or reduce the opening area of cavities in a circular saw blade and, thus,

that the recited six percent feature would have been an obvious design choice. Reliance upon *Boesch* would be improper because it would neither be obvious nor appreciated by one having ordinary skill in the art that the size of the openings should be varied in order to determine a cumulative, optimum opening area for transporting liquid therein. Neither the use of the cavity to transport liquid, nor the fact that the size of the opening would be a result effective variable, would be obvious or appreciated by the ordinary artisan.

Indeed, no applicable reference of record discloses or suggests the use of cavities in a circular saw blade for transporting liquid so as to make obvious to the ordinary artisan any result effective variable in such use. In fact, the opening area of the cavities as recited was arrived at by the present inventor through experimentation in inventing the use of a circular saw blade for transporting liquid.

Applicant submits that the same remarks apply with regard to leading corner/trailing edge feature, as well as the dependent claims. None of the recited features are rendered obvious by application of the principle exemplified by *Boesch*.

III. Conclusion

In view of the foregoing amendments and remarks, Applicant submits that the claims presented for examination stand in condition for allowance.

Accordingly, Applicant respectfully requests that the present application be passed to issue. Furthermore, it is respectfully requested that the Examiner contact the undersigned if any further action is deemed necessary by the Examiner in order to gain allowance of the present application, and if such further action may be accomplished through an Examiner's amendment or otherwise.

Respectfully submitted,
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